Remarks/Arguments

35 U.S.C. §103

Claims 18 and 1 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hayashi (U.S. Patent No. 5,313,282), in view of Kim et al. (GB 2 286 712 A).

The present invention, as recited by currently amended claim 1, describes a television signal processing apparatus comprising: a first tuner for tuning a first signal when said television signal processing apparatus is in a first mode of operation and where power is removed from said first tuning means during a second mode of operation; a second tuner for tuning a second signal when said television signal processing apparatus is in a first mode of operation and a second mode of operation, wherein power is applied for a portion of the time said television signal processing apparatus is in said second mode of operation; and a controller for applying power to said first tuner and said second tuner during said first mode of operation and for removing power from said first tuner during said second mode of operation, said controller further operative to cyclically apply and remove power to said second tuner during said second mode of operation, wherein power is applied to said second tuner less than 100 percent of the time said television signal processing apparatus is in said second mode of operation; and wherein said power is applied during said second mode of operation in response to a temperature measurement.

It is respectfully asserted that Hayashi and Kim, alone or in combination, fail to disclose a television signal processing apparatus "wherein said power is applied during said second mode of operation in response to a temperature measurement," as described in currently amended claim 1.

Hayashi teaches "a method and apparatus for controlling electrical power to a satellite broadcast receiver forming a part of a television device. The television device receives a command receiving a command (e.g. from a remote controller) to turn off electrical power. The television device determines if broadcast satellite recording is currently being executed, for example by an external VTR connected to an output port of

the television device. If broadcast satellite recording is being executed, power is turned off power to a portion of the television device while retaining electrical power to the satellite broadcast receiver. If broadcast satellite recording is not being executed, power is turned off to the broadcast satellite receiver also." (Hayashi Abstract)

The Office Action asserts that Hayashi discloses "applying power (see item 21 of Fig. 1) to a first tuner (items 10, 2 of Fig. 1) and a second tuner (items 22, 12 of Fig. 1) in a first mode of operation', see also col. 2 lines 32-34, col. 4 lines 41-43; 'removing power from said first tuner in a second mode of operation', see col. 6 lines 59-61; 'applying power to cyclically apply and remove power to said second tuner during said second mode of operation, wherein power is applied to said second tuner is less than 100 percent of the time duration of said second mode of operation,' see col. 6 lines 39-68." (Office Action, page 2)

Hayashi does not disclose a television signal processing apparatus comprising one or more temperature sensors that permit a processor to alter the duty cycles of the tuners and optional internal fan based on the temperature of the television signal receiving apparatus, as is described in the present invention. Such a scheme is advantageous because it allows for more efficient cooling of the apparatus and reduces the heat generated by high speed signal processing circuitry associated with the tuners while still allowing the reception of data in a standby mode. Hayashi does not describe or even mention an apparatus having an internal temperature sensor. Therefore, Hayashi fails to disclose a television signal processing apparatus "wherein said power is applied during said second mode of operation in response to a temperature measurement," as described in currently amended claim 1.

Kim teaches a system where "the power supply includes a first voltage regulator 22 for supplying a controller 25; a second voltage regulator 23 for supplying power to portions of the video recorder which operate only in a operation mode of the video recorder 26.27,28; and a third voltage regulator 24 for supplying power to portions 29. 30 which perform a program reservation function and a timer function. The controller, in a power on mode, outputs a signal for turning on the second and third voltage regulators. In a power off or standby mode, the controller ascertains whether there is a reserved program or not so that

if not. a signal for turning off the second and third voltage regulators is output, but if so, a signal for periodically turning on/off the third voltage regulator portion is output. Thus the tuner portion may be separately powered during the standby mode, which is particularly relevant to VPS-equipped video recorders." (Kim et al. Abstract)

The Office Action asserts that "Hayashi does teach apply and remove power to the tuner as pointed out above; and the reference to Kim shows it is notoriously well known in the art to cyclically (periodically) apply and remove power to a tuner (as evidence see Kim at the Abstract paragraph (57), specifically lines 5-10, at Fig. 2 items 24, 29, and at Fig. 3) in order, inter alia, to reduce power consumption." (Office Action, page 3)

Like Hayashi, Kim does not describe or even mention a television signal receiving apparatus having a temperature sensor that permits a processor to alter the duty cycles of the internal tuners for a more power efficient standby mode. Therefore, Hayashi and Kim, alone or in combination, fail to disclose a television signal processing apparatus "wherein said power is applied during said second mode of operation in response to a temperature measurement," as described in currently amended claim 1.

In view of the above remarks and amendments to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure provided by Hayashi and Kim, alone or in combination, that makes the present invention as claimed in currently amended claim 1 unpatentable. It is further submitted that currently amended independent claim 18 is allowable for at least the same reasons that currently amended independent claim 1 is allowable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

Claims 19-22, 2-4, stand rejected under 35 U.S.C. §103(a) as being unpatentable over Hayashi (U.S. Patent No. 5,313,282), in view of Kim et al. (GB 2 286 712 A), and further in view of Shimakawa et al. (U.S. Patent No. 6,452,644).

Shimakawa teaches an invention that "relates to the reception of data by a data broadcast receiver, particularly, a mobile data receiver for the Japanese TV data

multibroadcast sound subcarrier system. The receiver is controlled to receive a desired type of data, for example, weather forecasts, news, stock prices, etc. The invention provides the transmission of time information which specifies, for each type of data, when the data will be transmitted or retransmitted. This allows the receiver to enter a standby mode in which the power consumption is reduced. On, or slightly before, the specified time, the receiver switches on to receive, decode and display the desired data. The invention is also applicable in television receivers having the facility to receive electronic program guides (EPG) or other services. The receiver is informed about the time at which an updated version of the EPG can be expected." (Shimakawa Abstract)

The Office Action asserts that Shimakawa "shows it is notoriously well known in the art for a device to facilitate the reception of auxiliary data and reduce power consumption (as evidence see Shimakawa at col. 8 lines 26-31, col. 6 lines 15-16); because of these teachings an artisan would be motivated to combine the references to arrive at the claimed invention, the combination would advantageously provide a system that would facilitate the reception of auxiliary data and reduce power consumption." (Office Action, page 4)

Like Hayashi and Kim described above, Shimakawa does not describe or even mention a television signal receiving apparatus having internal a temperature sensor that permits a processor to alter the duty cycles of the internal tuners for a more power efficient standby mode. Therefore, Hayashi, Kim, and Shimakawa, alone or in combination, fail to disclose a television signal processing apparatus "wherein said power is applied during said second mode of operation in response to a temperature measurement," as described in currently amended claim 1.

Applicant further notes that claims 19-22 and 2-4 are dependent upon claims 18 and 1, which are allowable for the reasons described above. Therefore, it is submitted that they too are allowable for at least the same reasons that their respective independent claims are allowable.

In view of the above remarks and amendments to the claims, it is respectfully submitted that there is no 35 USC 112 enabling disclosure provided by Hayashi, Kim, and Shimakawa, alone or in combination, that makes the present invention as claimed in claims 19-22 and 2-4 unpatentable. Thus, it is further respectfully submitted that this rejection has been satisfied and should be withdrawn.

Having fully addressed the Examiner's rejections it is believed that, in view of the preceding amendments and remarks, this application stands in condition for allowance. Accordingly then, reconsideration and allowance are respectfully solicited. If, however, the Examiner is of the opinion that such action cannot be taken, the Examiner is invited to contact the applicant's representative at (609) 734-6804, so that a mutually convenient date and time for a telephonic interview may be scheduled.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account 07-0832.

Respectfully submitted,

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